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BOOK REVIEW

Annette J. Dobson and Adrian G. Barnett: An introduction to generalized linear models

CRC Press, Boca Raton, FL, 2008, i + 307 pp., US $ 59.95, € 57.99, ISBN 978-1-58488-950-2

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This is the 3rd edition of the well-known introductory text on generalized linear models (GLMs), now with a second author, A.G. Barnett.

Like the preceding edition the 3rd edition has been considerably expanded: the 2nd edition provided new chapters on nominal and ordinal regression, and also some survival analysis and analysis of longitudinal data, while the current edition adds three further chapters, all on Bayesian analysis and methodology. Specifically, there is now a chapter covering MCMC basics. A side effect of these numerous extensions is that the title is now somewhat misleading, in that not all models covered here are GLMs, although those that are not are, in a sense, close to GLMs and reuse GLM methodology. Examples include multinomial or ordinal logistic regression. A more appropriate title for the new edition would thus be "Introduction to Regression Modelling."

Compared to earlier editions there is also more code showing how to use GLM methodology in various software packages, notably R and Stata; the Bayesian chapters employ a combination of R and WinBUGS. On occasion, the R code is somewhat uglier than need be.

Some 40 data sets are available from a Web page. Data and examples are mostly from biostatistics and related fields, thus the book will perhaps be less appealing to instructors in the social sciences.

Inevitably, discussion of some topics is rather brief. For example, the important issue of overdispersion in count data is only briefly mentioned, along with the negative binomial distribution as one of its remedies. Thus instructors intending to cover count data in some detail might have to draw on additional sources.

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Overall, this new edition remains a highly useful and compact introduction to a large number of seemingly disparate regression models. Depending on the background of the audience, it will be suitable for upper level undergraduate or beginning post-graduate level courses.